Installation and Configuration Guide for Windows Server 2003

hp StorageWorks Command View EVA

Product Version: 3.3

First Edition (September 2004)

Part Number: T3268-88001

The HP StorageWorks Command View EVA Installation Guide for Windows 2003 describes the procedures to install and remove Command View EVA software on a Windows server.

For the latest versions of storage documentation, access the HP storage web site at http://www.hp.com/country/us/eng/prodserv/storage.html.

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Command View EVA Installation and Configuration Guide for Windows Server 2003
First Edition (September 2004)
Part Number: T3268-88001

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about this guide

This Windows server installation guide provides information to help you:

- Understand Command View EVA installation prerequisites.
- Install and reinstall Command View EVA software.
- Remove Command View EVA software.
- Contact technical support for additional assistance.

“About this Guide” topics include:

- Overview, page 6
- Conventions, page 7
- Getting help, page 8

Overview

This section covers the following topics:

- Intended audience
- Prerequisites
- Related documentation

Intended audience

This guide is intended for use by customers and HP authorized service providers who are installing Command View EVA on a Windows-based server. To install Command View EVA on a Storage Management Appliance, see *HP StorageWorks Command View EVA Getting Started Guide* on the product CD and under Technical Documents at: http://h18006.www1.hp.com/products/storage/software/som/index.html

Prerequisites

In addition to being familiar with Command View EVA, readers should also be knowledgeable with the following:

- HP StorageWorks Enterprise Virtual Arrays

Related documentation

In addition to this guide, HP provides the following documents:

- *HP StorageWorks Enterprise Virtual Array Updating Product Software*
- *HP StorageWorks Command View EVA Getting Started Guide*
- *HP StorageWorks Command View EVA Release Notes*

These documents are available from http://h10025.www1.hp.com/ewfrf/wc/manualCategory?lc=en&cc=us&product=296426.

Conventions

Conventions consist of the following:

- Document conventions
- Text symbols

Document conventions

This document follows the conventions in Table 1.

Table 1: Document conventions

Convention	Element
Blue text: Figure 1	Cross-reference links
Bold	Menu items, buttons, and key, tab, and box names
Italics	Text emphasis and document titles in body text
`Monospace font`	User input, commands, code, file and directory names, and system responses (output and messages)
`Monospace, italic font`	Command-line and code variables
Blue underlined sans serif font text (http://www.hp.com)	Web site addresses

Text symbols

The following symbols may be found in the text of this guide. They have the following meanings:

WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or death.

Caution: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or data.

Tip: Text in a tip provides additional help to readers by providing nonessential or optional techniques, procedures, or shortcuts.

Note: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Getting help

If you still have a question after reading this guide, contact an HP authorized service provider or access our web site: http://www.hp.com.

HP technical support

Telephone numbers for worldwide technical support are listed on the following HP web site: http://www.hp.com/support/. From this web site, select the country of origin.

Note: For continuous quality improvement, calls may be recorded or monitored.

Be sure to have the following information available before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

HP storage web site

The HP web site has the latest information on this product, as well as the latest drivers. Access storage information from http://www.hp.com/country/us/eng/prodserv/storage.html. From this web site, select the appropriate product or solution.

HP authorized reseller

For the name of your nearest HP authorized reseller:

- In the United States, call 1-800-345-1518
- In Canada, call 1-800-263-5868
- Elsewhere, see the HP web site for locations and telephone numbers: http://www.hp.com.

Installation Preparation

1

This chapter describes preparation for installing the Command View EVA on a Windows server. To install on a Storage Management Appliance, see *HP StorageWorks Command View EVA Getting Started Guide*. Read the sections below before installing Command View EVA.

- Requirements and recommendations, page 9
- Preparation, page 10

Requirements and recommendations

The following sections discuss server, browser, and software specifications.

Server specifications

Table 2: Server pecifications

Command View EVA and Storage Node Manager	For installation of complete Storage Operations Manager solution, including Storage Node Manager:
	Dedicated Windows-based management server:
	■ Windows Server 2003 EE (32 bit)
	  ■ Processor: 1.26 GHz (minimum)
	  ■ Memory: 2 GB (minimum)
	  ■ Free Disk Space: 120 MB for each installation plus 10MB for each managed array
	  ■ Fibre Channel HBA

Command View EVA only (option)	Dedicated Windows-based management server: ■ Windows Server 2003 EE (32 bit) ■ Processor: 1.26 GHz (minimum) ■ Memory: 1 GB (minimum) ■ Free disk space: 120 MB plus 10 MB for each managed array ■ Fibre Channel HBA
Storage Node Manager only (optional server support)	Microsoft Windows 2003 (32-bit) WebServer, Standard Server, Enterprise Server ■ Intel processor: 1 GHz (minimum) or up to 2.4 GHz, dual processor (recommended) ■ Memory: 1 GB (minimum), 2 GB (recommended) ■ Disk space: 700 MB ■ Video resolution: 800x600

Browser specifications

The browser is used on clients to access Command View EVA on the management server.

Table 3: Browser specifications

OS	Browser	JRE
Windows 2000 server	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1_03, 1.4.1_04
Windows 2000 Advanced server, SP4 (32-bit)	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1_03, 1.4.1_04
Windows Server 2003 Enterprise, SP1 (IA32)	Internet Explorer 6.0.3790 (SP1)	JRE 1.4.1_03, 1.4.1_04
Windows 2000 Professional	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1_03, 1.4.1_04
Windows XP Professional	Internet Explorer 6.0.2800.1106 (128-bit)	JRE 1.4.1

Preparation

Before installing Command View EVA, refer to the *HP StorageWorks Command View EVA Getting Started Guide* for the following information:

- Introduction to Command View EVA
- Licensing instructions
- Post-installation tasks

Also, for the latest information review the release notes.

Steps to building a management server

1. Select adequate server hardware. Refer to Requirements and recommendations on page 9.
   - Proliant
   - Non-Proliant

2. Install supported Host Bus Adapter. Refer to the *HP StorageWorks Windows Installation and Configuration Guide for Enterprise Virtual Array* and the Supported HBAs table below.

Table 4: Supported HBAs

Vendor model	HP model	Supported SCSI miniport drivers	Supported firmware/BIOS
QLogic QLA2340 QLogic QLA2342	FC2214 FCA2214DC	9.0.0.13	1.34
		8.2.0.73	
Emulex LP9802 Emulex LP9802DC	FCA2404 FCA2404DC	5-5.10a9	1.81a2/1.70a1
		5-4.82a16	1.01a2/1.63a1
Emulex LP982	FCA2408	5-5.10a9	1.81a2/1.70a1
		5-4.82a16	1.01a2/1.63a1
Emulex LP952	FCA2101	5-5.10a9	3.92a2/1.70a1
		5-4.82a16	3.91a1/1.63a1

3. Install Windows 2003 Enterprise Edition.
   - For HP Proliant, use Smartstart 7.1
   - Install Microsoft critical updates for 2003.
4. Install the appropriate EVA3000 or EVA5000 platform kit. Refer to the *HP StorageWorks Windows Installation and Configuration Guide for Enterprise Virtual Array* available from the EVA3000 and EVA5000 platform kits on http://h18006.www1.hp.com/products/storageworks/softwaredrivers/enterprise/index.html.
5. Install Secure Path Driver (for Application Server **only**).
   - Secure Path 4.0c SP1 is recommended.

Note: Secure Path Manager must be installed on a separate Windows host.

Now you can install Command View EVA 3.3 (see Installing Command View EVA on page 15) followed by any additional supported storage management applications.

Reading related documents

The *Command View EVA Getting Started Guide* other documents referenced in this guide imply later versions and added components, as shown in Table 5.

Table 5: Later versions and added components

References to	Also apply to
Storage Management Appliance (SMA)	Management server
Command View EVA 3.2	Command View EVA 3.3
Storage Operations Manager 1.1	Storage Operations Manager 1.2
Continuous Access EVA 1.1, 1.1a, 1.1b	Continuous Access EVA 1.2

References to	Also apply to
Business Copy 2.2	Business Copy 2.3
VCS 3.010	VCS 3.014 and VCS 3.020
SMI-S 3.2	SMI-S 3.3

Creating a CD-ROM

After copying the Windows 2003 Server Installation folder from the product CD-ROM, HP recommends backing up the folder to CD-ROMs. You can use CD-ROMs to install Command View EVA. Keep CD-ROMs in several locations so that you can install Command View EVA later without re-copying or downloading the file.

HP recommends making the following CD-ROMs.

- One for archival
- One to keep with the platform containing Command View EVA
- One or more to retain with Command View EVA-enabled hosts
- One or more for installation
- One copy at each site

To use the CD-ROM for installation, place the newly created CD-ROM in the CD drive. The CD-ROM is now ready and the product software is positioned for installation.

Note: All files must be at the root of the CD and all files must accompany setup.exe for the installation to run.

Installing Command View EVA

2

This chapter describes how to install Command View EVA on a Windows-based server. Ensure that you have read and successfully completed all steps in “Installation Preparation” starting on page 9.

Installing Command View EVA on a Windows-based server

Complete the following procedure to install Command View EVA.

1. Navigate to the `setup.exe` file on the CD in the Windows 2003 Server Installation folder.
2. Double-click the **`setup.exe`** file to begin installation.

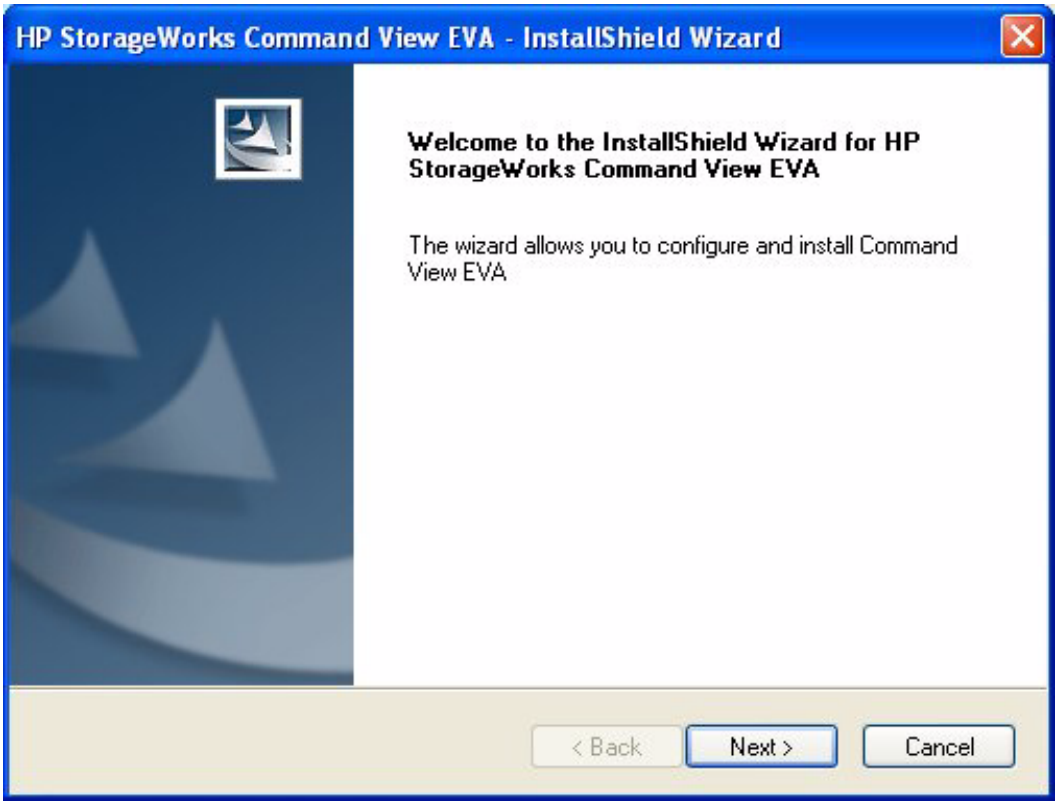

Figure 1: Introduction

3. Click **Next**.

Note: Click **Cancel** at any time during the installation to exit the installation.

---

4. Carefully review the Command View EVA License Agreement before continuing with the installation.

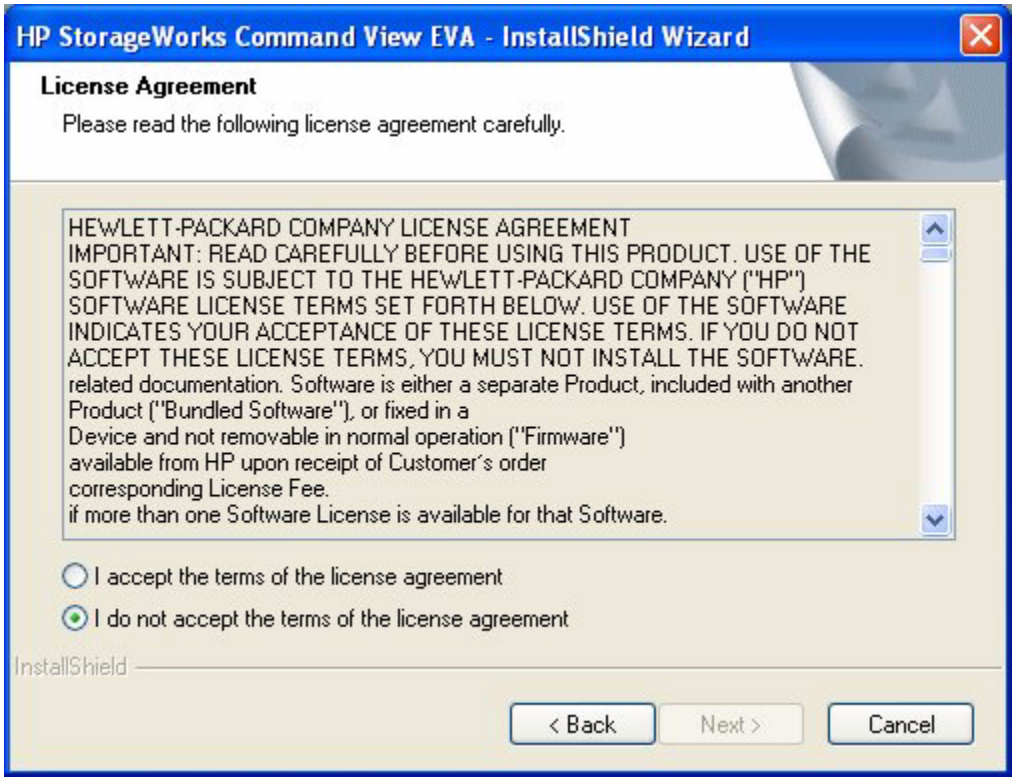

Figure 2: Command View EVA License Agreement

5. Select **I accept the terms of the license agreement** to continue the installation.
6. Click **Next**.
7. Click **Finish**.

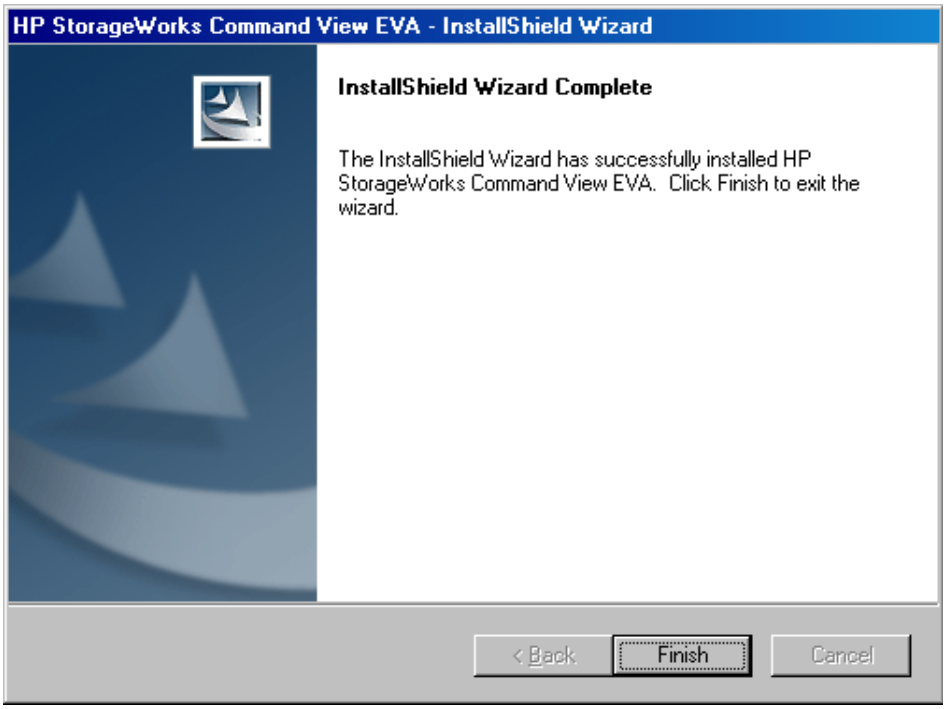

Figure 3: Command View EVA InstallShield Wizard Complete

8. Upon completion, verify that Command View EVA is installed.
   a. In the Control Panel, double-click **Add/Remove Programs**. **command view eva** should appear.

   The Command View EVAsoftware is now installed.
9. Change the default password immediately for increased security. Refer to the online help for instructions.

You can now install any additional supported storage management applications.

Launching Command View EVA

To launch Command View EVA on the Windows-based server:

1. Navigate to https://<hostname>:2381/.
2. Enter your User name and Password and then click **LOGIN**.

Note: Your user name and password combination is either administrator|administrator or the user name and password combination used during installation of SmartStart or another application.

---

3. Click **Yes** on any Security messages that display.
4. Under Other Agents, right-click **command view eva** and choose **Open in a New Window** from the drop-down list.

   The hp StorageWorks command view eva window displays.

In addition to the steps below, refer to the *HP StorageWorks Command View EVA Getting Started Guide* to launch Command View EVA on the Storage Management Appliance:

1. On the hp OpenView storage management appliance page, click **Devices**.
2. Click **command view eva** on the new toolbar that displays.
3. Click Yes on any Security messages that display.

Installing SMI-S on a Windows-based server

Installing SMIS EVA is optional. SMI-S EVA is packaged with the Command View EVA CD and is installed after installing Command View EVA. This section describes installation procedures for the following:

- Installing SMI-S EVA on a server.

Note: After installation, change the default user names and passwords using UserAccountsManager.bat explained in the *HP StorageWorks Enterprise Virtual Array Getting Started Guide* available at http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.

Installing SMI-S EVA on a server

To install SMI-S EVA on a server, complete the following steps:

1. Copy the `hpSMISEVA_3.3.exe` to any folder.

   For example, `C:\Temp`.

2. Double-click `hpSMISEVA_3.3.exe`. The contents are extracted to the directory where you copied the `hpSMISEVA_3.3.exe` file.

   In this example, `C:\Temp\hpSMISEVA_3_3`.

3. Double-click the `hpSMISEVA_3_3\Setup.exe`. to install SMI-S EVA. An `inshield.txt` file is created in the directory where you copied the `hpSMISEVA_3.3.exe` file.

Note: User intervention is not required to install HP StorageWorks SMI-S EVA.

Verifying SMI-S EVA installation

To verify the SMI-S EVA installation on the server, complete the following steps:

1. Go to the directory where you copied the `hpSMISEVA_3.3.exe` file. An `inshield.txt` is created after you install SMI-S EVA.
2. Open the file and check if the following message is present:

```
Installing hp StorageWorks SMI-S for EVA <Date> <Time>
Install Complete.
```

Troubleshooting

Table 6 describes the problems that you may face with SMI-S EVA and the actions to rectify these problems.

Table 6: Troubleshooting

Item	Action
SMI-S EVA Service failed to start.	Verify the service registration. Verify the event log details.
SMI-S EVA Service is not able to populate data.	Check if the directory C:*Program Files\Hewlett-Packard\SMI-S\cimom\persistence\classes\root\EVA* is empty. If the directory is empty, load the mofs by invoking the batch file ***LoadEvaMofs.bat*** in *C:\Program Files\Hewlett-Packard\SMI-S\EVAProvider.* Ensure that the server name and port number are correct.
SMIS-EVA failed to retrieve data.	Check if the server is active or passive. If the server is passive, access to the array is limited; only the enumeration of storage cells work. Check whether the Command View EVA is running on the server. Ensure that the **Command View EVA** and **hp StorageWorks SMI-S for EVA** applications are running. If any of these applications are not running, select the application, and click **Start**.

Post-Installation Changes

3

This chapter covers the following topics:

- Browser settings, page 23
- Starting and stopping SMI-S EVA, page 25

Browser settings

This section contains information and details to help ensure that your browser configuration is correct for this product. The browser is used to access Command View EVA.

Deleting temporary Internet files

Before using Command View EVA for the first time, delete the temporary Internet files in your browser. To do this in Internet Explorer:

1. Select **Tools/Internet Options**.
2. Click **Delete Files** on the **General** tab.
3. Click **OK**
4. Restart your browser.

Browser refresh required after agent upgrade

To load the latest client code in your browser, refresh the browser after upgrading Command View EVA.

- To refresh your browser in Internet Explorer, press **CTRL + F5**.
- To refresh your browser in Mozilla, press and hold **Shift** and click **Reload**.

System color setting

When accessing Command View EVA with Internet Explorer or Mozilla, set the display properties colors setting to True Colors or 16,000,000 colors.

Page caching

For the best performance of Command View EVA v3.3, enable page caching. Page caching is allowed only in an HSV-only environment. Page caching is not allowed in heterogeneous environments (for example, HSG and HSV).

Follow the steps appropriate for your browser to check or enable page caching.

Enabling Page Caching in Internet Explorer 6.x

1. Open Internet Explorer and choose **Tools/Internet Options**.
2. Click **Settings** on the **General** tab.
3. On the Settings page, choose **Automatically** in the **Check for newer versions of stored pages** option.
4. Ensure that a Temporary Internet Files folder is selected and that it is at least 10 MB in size.
5. Click **OK** until you return to the main browser window.

Browser behavior

Be aware of the following considerations when using browsers.

The right-click menu in some browser configurations is disabled. If you are in a configuration where right-clicking brings up a menu, do not use the **Internet Explorer Open Link in New Window, Save Target As, Set as Desktop Item**, or **Add to Favorites** options or their Mozilla equivalents. These links will lead you back into the GUI without the proper context and cause incorrect information to display.

Note: This applies only after Command View EVA is launched.

Tuning navigation tree performance

Command View EVA v3.3 displays information about your storage system in the form of a navigation tree located in the Navigation pane of your browser window. The tree shows the condition of and relationships among the objects in your storage area network (SAN). Large tree structures (in large SAN environments) display more slowly than smaller structures. This can cause a performance problem.

You can tune the performance of your navigation tree by setting the number of tree objects displayed at one time. The default number of **tree objects displayed** is 100.

- For configurations with a small number of objects, set the number to a value higher than the number of objects in your SAN. By doing this, the management agent will send the complete tree structure to your browser each time you click on the tree. This provides good performance in smaller environments.
- For configurations with a larger number of objects, set the number to a smaller number (20-50) of objects. By doing this, the management agent will send only a small number of objects to your browser each time you click on the tree. Your browser will display a special page and scroll buttons in the navigation tree, allowing you to request the display of other tree segments.

To set the number of tree objects displayed:

1. Click **Agent Options**.
2. Click **User Interface Options**.
3. Set the number of objects displayed in the **Tree objects displayed** field.
4. Click **Save Changes**.
5. Click **OK**.

Starting and stopping SMI-S EVA

Complete the following steps to start or stop the SMI-S EVA service:

1. Click **Settings** from the Start panel on your Windows server.
2. Click **Control Panel** and then **Administrative Tools.**
3. Click **Services** and select **`hp StorageWorks SMI-S CIMOM`**.
4. Click **Start** to start the service or click **Stop** to stop the service.

Configuring SMI-S EVA

Install SMI-S EVA after installing Command View EVA. The following post-installation procedure must be completed prior to using SMI-S EVA.

Post Installation Steps

After SMI-S EVA is installed, add `127.0.0.1` to the list of recipients who receive events generated by every HSV pair connected to the server. This can be done using the GUI of the hp StorageWorks Storage Management Appliance software. In addition, configure the event and host notifications as indicated in the *HP StorageWorks Enterprise Virtual Array Getting Started Guide* available at http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex

The configuration files to set up the SMI-S EVA service are in the following directory where SMI-S is installed: `C:\Program Files\Hewlett-Packard\SMI-S\cimom`.

Modify the configuration files as indicated in Table 7.

Table 7: Configuration Files

File	Description
EVAprovider.properties	Used to configure the provider.
EVA.provider	To configure the authorization modules and audit logging features.
cim.properties	CIMOM-related parameters to enable SSL, JAAS and so on.
JAAS.policy	Used to configure an Access Control List (ACL).

You can manually edit the configuration files by connecting through Windows Terminal Services. After editing the configuration parameters, be sure to restart the SMI-S EVA service.

EVAprovider.properties

Configure `EVAprovider.properties` files as indicated in Table 8.

Table 8: Evaprovider.properties

Item	Description
Apiserver	Server name where the Command View EVA runs (usually local host).
UserName	UserName to connect to Command View EVA. (This field is required if **Apiserver** is not set to **Localhost**).
PassWord	Password to connect to the Command View EVA. (This field is required if **Apiserver** is not set to **Localhost**).
PortNumber	Command View EVA runs on 12301 port.
NameSpace	Namespace supported by the provider. The default value is root/EVA.
Debug	Set value to True to enable the debug option. Set value to False to disable the Debug option. When you enable the debug option, the debug data, for example, xml packets, is stored in the debug files in the CIMOM directory. All debug files are stored in the following directory: C:\ProgramFiles\Hewlett-Packard\SMI-S\cimom
Max_Log_Files	Indicates the maximum number of log files that are allowed in the CIMOM directory. You can use this option to limit the debug data that accumulates in the directory. This action removes the old data in a cyclic fashion. In addition, the timestamp, which is appended as part of the file name, helps locate the most recent debug data file. When you do not specify the value, Max_Log_Files uses the default value 5.
Max_Log_Filesize	Indicates the maximum size of the debug file. When you do not specify a value for Max_Log_Filesize, it uses the default value 10 MB.
Lifecycle_Indication_Poll_Frequency	Indicates the frequency (in minutes) at which the EVA provider queries the underlying device to sense the lifecycle-related changes. The minimum permitted value is 2 minutes, and the default value is 10 minutes. To receive the SMI-S lifecycle indications at a quicker rate, set a lower value for this parameter. **Note:** A low value for this property can create an overhead on the software. In addition, it can increase the overall response time of the Command View EVA and SMI-S EVA provider software.

EVA.properties file

Modify the parameters in the eva.properties file as indicated in Table 9.

Table 9: Eva.properties File

Item	Description
AUTHORIZATION_MODULE	Specify the authorization mechanism to be used.The value is the class name of the authorization module. The CIMOM supports the following authorization modules: ■ BasicAuthorization ■ JAASAuthorization BasicAuthorization module is the default module.
AUDIT_LOGGER	Specify the class name the location of the Audit Log implementation. AuditLogSMIS is the default implementation. The class name must implement the com.hp.utlis.AuditLog interface present in the CIMOM. If you do not specify the audit log class name, the com.hp.utlis.AuditLogSMIS is used.
AUDIT_LOG_FILENAME	Specify the file name to record audit log information. The default file name is audit.log.
NameSpace	Namespace supported by the provider. The default value is root/EVA.

Cim.properties file

Modify the parameters in the cim.properties file as indicated in Table 10.

Table 10: Cim.properties File

Field	Purpose
`EnableSSL`	Set to true to enable SSL.
`LogResponseSeparate`	Set to true to separate the requests and response packets.
`LogFilesCount`	Indicates the number of log files maintained by `CIMOM`. The default number is 5. Modify this number to increase or decrease the number of log files. When you initiate the `CIMOM`, it starts logging to the `<serverDebugFile>+0` file. (The `serverDebugFile` is specified in the `cim.properties` file). When the file size reaches the specified threshold (`MaxLogFileSize`), the `CIMOM` starts logging into the next file in the sequence in the ascending order and overwrites the last modified file.
`MaxLogFileSize`	Maximum size of each log file in bytes. 15 MB is the default size of each log file. You can modify this number. When a log file reaches the specified threshold, the `CIMOM` starts logging in to the next log file.

Note: Do not modify any parameter that is not listed in the table.

Uninstalling the Command View EVA Software

4

This chapter describes how to uninstall Command View EVA software from a Windows server.

To remove this software, use the following procedure:

1. Select **Start > Settings > Control Panel**.
2. Double click **Add/Remove Programs**.

   The **Add/Remove Programs** dialog displays.
3. Select **command view eva** from the list, and then click **Change/Remove**.

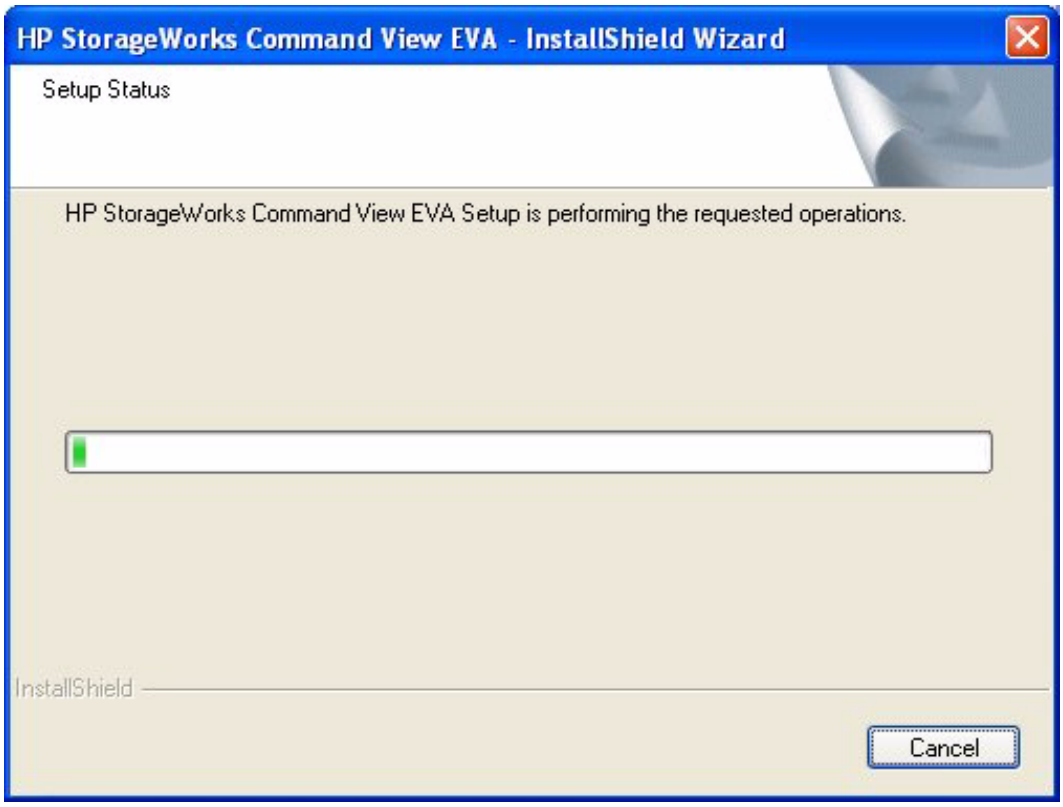

Figure 4: Command View EVA removal window

The Command View EVA is now removed.

Uninstalling SMI-S EVA

Complete the following steps to uninstall SMI-S EVA from the Windows server:

1. Go to the **Control Panel**.
2. Select **Add/Remove Programs**.
3. Select **hp StorageWorks for SMI-S EVA** from the list of applications.
4. Click **Remove**. The `inshield.txt` file contains the following message:

   ```
   Uninstalling hp StorageWorks SMI-S for EVA <Date> <Time>
   Uninstall Complete.
   ```

Networking Industry Association Public License

A

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1. Definitions.

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